

REMARKS

This paper is being provided in response to the Final Office Action dated January 11, 2010, for the above-referenced application. In this response, Applicants have amended claims to clarify that which Applicants consider to be the presently-claimed invention. Applicants respectfully submit that the amendments to the claims are fully supported by the originally-filed specification, consistent with the discussion herein.

The rejection of claims 29, 30, 33-46, 49-62 and 65-73 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent App. Pub. No. 2005/0055518 to Hochberg, et al. (hereinafter "Hochberg") in view of U.S. Patent App. Pub. No. 2002/0156936 to Burgess (hereinafter "Burgess") and further in view of U.S. Patent No. 6,185,576 to McIntosh (hereinafter "McIntosh") is hereby traversed and reconsideration is respectfully requested.

Independent claim 29 recites a method of processing data in a computer system comprising at least one host and at least one storage system. The method includes receiving a request, from the host, to delete a unit of data stored on the storage system. In response to the request, it is determined whether a previously-defined retention period for the unit of data has expired. The determination includes retrieving first information, associated with the unit of data, that identifies second information specifying the previously-defined retention period for the unit of data, where the first information is separate from the second information and includes information identifying a retention class to which the unit of data belongs, where the second information is the previously-defined retention period for the retention class that defines a period of time during which units of data belonging to the retention class cannot be deleted from and/or

modified on the at least one storage system, and where the at least one storage system stores a record associating a plurality of previously-defined retention periods with a plurality of retention classes. The determination further includes using the first information and the record stored on the at least one storage system to retrieve the second information specifying the previously-defined retention period for the unit of data. When it is determined that the retention period for the unit of data has not expired, the request to delete the unit of data is denied. Claims 30 and 33-44 depend directly or indirectly from independent claim 29.

Independent claim 45 recites at least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data, the computer system comprising at least one host and at least one storage system. The method includes receiving a request, from the host, to delete a unit of data stored on the storage system. In response to the request, it is determined whether a previously-defined retention period for the unit of data has expired. The determination includes retrieving first information, associated with the unit of data, that identifies second information specifying the previously-defined retention period for the unit of data, where the first information is separate from the second information and includes information identifying a retention class to which the unit of data belongs, where the second information is the previously-defined retention period for the retention class that defines a period of time during which units of data belonging to the retention class cannot be deleted from and/or modified on the at least one storage system, and where the at least one storage system stores a record associating a plurality of previously-defined retention periods with a plurality of retention classes. The determination further includes using the first information and the record stored on the at least one storage system to retrieve the second information

specifying the previously-defined retention period for the unit of data. When it is determined that the retention period for the unit of data has not expired, the request to delete the unit of data is denied. Claims 46 and 49-60 depend directly or indirectly from independent claim 45.

Independent claim 61 recites a storage system including at least one storage device to store a unit of data and at least one controller. The controller is adapted to receive a request to delete the unit of data; and in response to the request, determine whether a retention period for the unit of data has expired. The determination includes retrieving first information, associated with the unit of data, that identifies second information specifying the previously-defined retention period for the unit of data, where the first information is separate from the second information and includes information identifying a retention class to which the unit of data belongs, where the second information is the previously-defined retention period for the retention class that defines a period of time during which units of data belonging to the retention class cannot be deleted from and/or modified on the at least one storage system, and where the at least one storage device stores a record associating a plurality of previously-defined retention periods with a plurality of retention classes. The determination further includes using the first information and the record stored on the at least one storage device to retrieve the second information specifying the previously-defined retention period for the unit of data. When the controller determines that the retention period for the unit of data has not expired, the request to delete the unit of data is denied. Claims 62 and 65-73 depend directly or indirectly from independent claim 61.

Hochberg discloses a method, system and program for retention management and protection of stored objects. The Office Action cites principally to Figure 8 of Hochberg which shows operations of an archive program to handle a request to delete an archived object. Hochberg discloses that, when a request to delete an object is received, the object is deleted only if the retention period for the object ID has expired. The system accesses the expiration entry for the object in the expiration table and determines whether the current time minus the retention period start exceeds the retention period for the object. (See, e.g., paragraph [0046] of Hochberg.)

Burgess discloses a system and method for providing componentized transports and forms. The Final Office Action cites principally to paragraph [0058] and Figure 6 of Burgess as disclosing retrieving first information associated with a unit of data.

McIntosh discloses an uniform subject classification system incorporating document management and records retention functions. The Office Action cites to McIntosh's Table II, beginning at col. 9, showing a representative classified retention schedule and further notes other portions of McIntosh as disclosing a retention period determined by governmental regulations and searching a document database by class code.

In Applicants' independent claims, Applicants recite, in some form, the features of retrieving first information, associated with the unit of data, that identifies second information specifying the previously-defined retention period for the unit of data, where the first information is separate from the second information and includes information identifying a retention class to

which the unit of data belongs, where the second information is the previously-defined retention period for the retention class that defines a period of time during which units of data belonging to the retention class cannot be deleted from and/or modified on the at least one storage system, and where the at least one storage system stores a record associating a plurality of previously-defined retention periods with a plurality of retention classes, and using the first information and the record stored on the at least one storage system to retrieve the second information specifying the previously-defined retention period for the unit of data. As discussed by Applicants, for example, on page 10, lines 21-30, a set of classes may be defined for retention periods to be assigned to units of data to facilitate the changing of retention periods for large groups of data units. The system may maintain a record that associates each class with a specified retention period. When a host computer sends a request to store a unit of data on the storage system, it may indicate the corresponding retention indirectly by specifying the class to which the unit of data belongs. The retention period for an entire class of data units may be changed by altering the retention period specified for the class. Applicants have found this to be advantageous, in that a large class of data units can have their retention periods altered by simply updating the record for the class, and without individually altering the retention period of each unit of data in the class.

The Final Office Action (page 2, bottom) notes that Hochberg does not disclose retrieving first information associated with the unit of data. The Final Office Action then cites to Burgess as disclosing this feature, but notes that neither Hochberg nor Burgess disclose second information specifying the previously-defined retention period for the unit of data. However, Applicants points that the first information recited by Applicants identifies the second information and, further,

Applicants recite the feature of using the first information and the record stored on the at least one storage system to retrieve the second information specifying the previously-defined retention period for the unit of data. Given the feature noted as missing in Hochberg and Burgess, it is not clear how McIntosh can overcome the deficiencies thereof in order to support analytically a combination of these references as purporting to disclose Applicant's recited features. That is, the Final Office Action cites to disclosure in McIntosh for second information and to Burgess for first information and to Hochberg as disclosing a request for deleting/modifying a unit of data. However, these disparate citations to disclosures in the references do not provide the specific recited relationships between the request, the first information, the second information and the stored record that are recited by Applicants. In particular, it is unclear how first information in one reference identify second information of another reference so as to be used to retrieve that second information in response to a request in a third reference. The Final Office Action does not set forth the analytical rationale for attempting to glean such interrelated features, as are recited by Applicants, from the combination of the citations to the distinct references.

Additionally, Applicant points out that the "first information" cited to in Burgess does not identify a retention class to which a unit of data belongs. The Final Office Action cites to paragraph [0058], Figure 6 and claims 1, 5, 6, 7 and 8 of Burgess; however, the "class identifier" described by Burgess in these sections corresponds to a message class, not a retention class of data. For example, Burgess states in paragraph [0054]: "An example of one particular message class might be IPM.MEETINGREQUEST.ACCEPT." The class identifier (cited by the Final Office Action as akin to "first information") of Burgess appears to have nothing to do with identifying a retention class. Moreover, as discussed in detail above, the class identifier of Burgess further does

not, in response to any request, identify second information that specifies a previously-defined retention period for a unit of data, nor is there disclosure in Burgess that would suggest the use of Burgess's class identifier for this purpose.

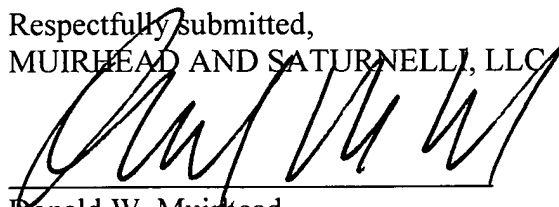
Applicant points out that although the first and second information is recited by Applicants as being *separate*, there is an interrelationship between the information that is recited to advantageous result according to the claimed features. For example, the separation of the first and second data makes it is possible to change the retention policy for a group of objects, no matter how many, using one operation to change the second information (retention policy) for an entire class associated with the group of objects. However, in contrast, Hochberg, that is noted in the Final Office Action as not disclosing the first and second information, discloses no separation of information like that recited by Applicants and, instead, provides a system that, at best, would directly associate a retention policy and/or a deletion hold policy with each object. Thus, changing the policy for a group of objects in Hochberg would be performed for each object, one at a time. The deficiencies of such as system as Hochberg with respect to Applicants' presently-claimed invention are not overcome by citations to information disclosed in different references since, as noted above, there is interrelationship of the cited information, nor the use therefrom, provided from the disparate reference citations that could be used to purport to disclose Applicants' claimed features.

Accordingly, Applicant submits that combined references of Hochberg, Burgess and McIntosh do not teach or fairly suggest, alone or in combination, at least the features of: in response to the request, determining whether a previously-defined retention period for the unit of

data has expired by: retrieving first information, associated with the unit of data, that identifies second information specifying the previously-defined retention period for the unit of data and using the first information and the record stored on the at least one storage system to retrieve the second information specifying the previously-defined retention period for the unit of data. As discussed in detail above, the interrelated use of first information, second information, and the stored record, in connection with responding to the above-noted request is not disclosed by citations to disparate information in the different references. In view of the above, Applicants respectfully request that the rejection be reconsidered and withdrawn.

Based on the above, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 508-898-8603.

Respectfully submitted,
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